APPENDIX A[1]

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[1]   Due to ASSIA's preliminary election of asserted claims, the following terms are no longer in dispute for purposes of this action only and thus are moot and should not be decided by the Court: (1) "the data further comprises determining a received signal strength indication" ('398 Patent, claim 2); and (2) "WAN rate" ('108 Patent, claims 3, 10, 17).

APPENDIX A-1: AGREED CONSTRUCTIONS

U.S. Patent Nos. 10,848,398 & 11,770,313			
'398 & '313 Patent Claim Language	**Plaintiff's Proposed Construction**	**Defendant's Proposed Construction**	**Court's Construction**
1. **"processed data"** ('398 Patent, claim 1) 1. A method for improving performance of one or more communication units, the method comprising: receiving, by a server, from network monitoring devices that monitor, in real-time, data associated with an operation of two or more communication units located in different geographical areas, the data comprising a parameter; processing, by the server, at least one of the data and historical data; based on the **processed data**, determining a policy for at least one of the two or more communication units; and in response to the server detecting interference or noise from nearby wireless channels, determining that packets will be lost regardless of rate selection and, otherwise, communicating the policy to at least one or more communication units that implement	AGREED	AGREED	"collective processed data from the plurality of communication units"[2]

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[2] The parties understand that the claim recites "two or more communication units" and thus the policy should be generated using data from the two or more communication units. Additionally, the use of "collective" in this construction does not preclude (a) the two or

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one or more algorithms that use the parameter and at least a rule or a condition for the one or more communication units to improve a performance of the one or more communication units.
 	
"processed data"
('313 Patent, claim 19)
 	
19. A method for managing a plurality of networks, the method comprising:
 	
    receiving, by a server, from network monitoring devices that monitor data associated with an operation of two or more communication units located in at least two networks within the plurality of networks, the data comprising a parameter;
 	
    processing, by the server, the received data;
 	
    based on the **processed data**, determining a policy for at least one of the two or more communication units; and
 	
    in response to the server detecting a degradation of network performance in at least one network within the plurality of networks, communicating the policy to at least one or more communication units that			

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more communication units from sending additional data not used to determine the policy, nor (b) additional communication units from receiving separate policies from the server.

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	implement one or more algorithms that use the parameter and at least one rule or one condition for the one or more communication units to improve a performance of the one or more communication units.			

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2.	**"collect LAN performance data from at least one of the computing device and other device"** ('654 Patent, claims 4, 21) 4. The method of claim 1 wherein the downloadable agent is operable to **collect LAN performance data from at least one of the computing device and other device** coupled to the LAN. 21. The system of claim 18, wherein the downloadable agent is operable to **collect LAN performance data from at least one of the computing device and other device** coupled to the LAN.	AGREED	AGREED	"collect LAN performance data from at least one of the computing device and the another device"

APPENDIX A-2: '996 PATENT DISPUTED TERMS

U.S. Patent No. 7,809,996				
	'996 Patent Claim Language	**Plaintiff's Proposed Construction**	**Defendant's Proposed Construction**	**Court's Construction**
3.	**"retransmission overhead control signal"** ('996 Patent, claim 20) 20. A transmission system comprising: a transmission channel to carry data between a transmitter and a receiver/decoder, each communicatively interfaced with the transmission channel; a transmission error value monitor communicatively interfaced with the receiver/decoder to periodically monitor for transmission error values indicative of impulse noise events on the transmission channel, wherein the transmission error values are periodically monitored after training and initialization on the receiver/decoder, the transmission error values being selected from a group comprising: a bit error rate, errored seconds, errored minutes, code violations over a fixed period of time, Signal-to-Noise Ratio (SNR) measured at the receiver/decoder, and Transmission Control Protocol and Internet Protocol (TCP/IP) throughput, and wherein the transmission error value monitor to further generate an input signal based on the transmission error values monitored; and a controller coupled with the transmitter to receive the input signal from the transmission error value monitor and to further generate a **retransmission overhead**	Not indefinite A signal for controlling one or more parameters that affect retransmission overhead	Indefinite	

APPENDIX A-2: '996 PATENT DISPUTED TERMS

	control signal for the transmitter in response to the input signal.			
4.	**"retransmission"** ('996 Patent, claim 20) 20. A transmission system comprising: a transmission channel to carry data between a transmitter and a receiver/decoder, each communicatively interfaced with the transmission channel; a transmission error value monitor communicatively interfaced with the receiver/decoder to periodically monitor for transmission error values indicative of impulse noise events on the transmission channel, wherein the transmission error values are periodically monitored after training and initialization on the receiver/decoder, the transmission error values being selected from a group comprising: a bit error rate, errored seconds, errored minutes, code violations over a fixed period of time, Signal-to-Noise Ratio (SNR) measured at the receiver/decoder, and Transmission Control Protocol and Internet Protocol (TCP/IP) throughput, and wherein the transmission error value monitor to further generate an input signal based on the transmission error values monitored; and a controller coupled with the transmitter to receive the input signal from the transmission error value monitor and to further generate a **retransmission** overhead	No construction necessary; plain and ordinary meaning. This term should not be construed separately from "retransmission overhead control signal."	Transmission of the same data that was previously transmitted Alternatively, transmission of at least some of the same data that was previously transmitted	

APPENDIX A-2: '996 PATENT DISPUTED TERMS

	control signal for the transmitter in response to the input signal.			
5.	**"periodically monitor" / "periodically monitored"** ('996 Patent, claim 20) 20. A transmission system comprising: a transmission channel to carry data between a transmitter and a receiver/decoder, each communicatively interfaced with the transmission channel; a transmission error value monitor communicatively interfaced with the receiver/decoder to **periodically monitor** for transmission error values indicative of impulse noise events on the transmission channel, wherein the transmission error values are **periodically monitored** after training and initialization on the receiver/decoder, the transmission error values being selected from a group comprising: a bit error rate, errored seconds, errored minutes, code violations over a fixed period of time, Signal-to-Noise Ratio (SNR) measured at the receiver/decoder, and Transmission Control Protocol and Internet Protocol (TCP/IP) throughput, and wherein the transmission error value monitor to further generate an input signal based on the transmission error values monitored; and a controller coupled with the transmitter to receive the input signal from the transmission error value monitor and to further generate a retransmission overhead	"monitor at fixed intervals" / "monitored at fixed intervals"	Plain and ordinary meaning	

APPENDIX A-2: '996 PATENT DISPUTED TERMS

	control signal for the transmitter in response to the input signal.		

APPENDIX A-3: '654 PATENT DISPUTED TERMS

U.S. Patent No. 11,050,654			
'654 Patent Claim Language	**Plaintiff's Proposed Construction**	**Defendant's Proposed Construction**	**Court's Construction**
6. **"on-demand change request"** ('654 Patent, claims 1, 18) l. A method performed by a downloadable agent, the method comprising: collecting WAN performance information, wherein the downloadable agent is executable on a computing device coupled to a LAN of a broadband subscriber, wherein the LAN is coupled by another device to a WAN; transmitting the WAN performance information to a machine, wherein the machine is operable to: store the WAN performance information in a database associated with the machine, analyze the WAN performance information to generate an analysis result, the analysis result comprises at least throughput; and report the analysis result to at least one of the broadband subscriber and the broadband subscriber's service provider; and sending an **on-demand change request** associated with at least one of throughput, or latency.	Plain and ordinary meaning	"an active step, performed by the downloadable agent, to request change"	

APPENDIX A-3: '654 PATENT DISPUTED TERMS

	18. A system comprising: a database; and a server coupled to the database, the server operable to: receive WAN performance information from a downloadable agent, wherein the downloadable agent is executable on a computing device coupled to a LAN of a broadband subscriber, wherein the LAN is coupled by another device to a WAN; and store the WAN performance information in the database associated with the server, analyze the WAN performance information to generate an analysis result, the analysis result comprises at least throughput; and report the analysis result to at least one of the broadband subscriber and the broadband subscriber's service provider; wherein the server is operable to receive an **on-demand change request** associated with at least one of: throughput, or latency.			
7.	**"WAN performance information"** ('654 Patent, claims 1, 3, 8, 16, 18, 20, 33, 36) l. A method performed by a downloadable agent, the method comprising:	Plain and ordinary meaning	"data related to the communication links within the WAN, which does not include data related to	

APPENDIX A-3: '654 PATENT DISPUTED TERMS

collecting **WAN performance information**, wherein the downloadable agent is executable on a computing device coupled to a LAN of a broadband subscriber, wherein the LAN is coupled by another device to a WAN; transmitting the **WAN performance information** to a machine, wherein the machine is operable to: store the **WAN performance information** in a database associated with the machine, analyze the **WAN performance information** to generate an analysis result, the analysis result comprises at least throughput; and report the analysis result to at least one of the broadband subscriber and the broadband subscriber's service provider; and sending an on-demand change request associated with at least one of throughput, or latency. 3. The method of claim 1, wherein the machine is operable to store the **WAN performance information** with an associated timestamp. 8. The method of claim 1, wherein the **WAN performance information** includes at least one of: topological information geographical information, latency,		transactions at the application layer related to client-server transactions that are executed"

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jitter, packet loss, time, type of communication device, device network identification, manufacturer and model of equipment, equipment characteristics, firmware, user's network usage pattern, user's provisioned WAN service, RF characteristics including at least one of: signal power, frequency bands and mode of operation, environment statistics, or data on operation of communication devices. 16. The method of claim 1, wherein the machine is operable to collect **WAN performance information** by polling or by a scheduled based system. 18. A system comprising: a database; and a server coupled to the database, the server operable to: receive **WAN performance information** from a downloadable agent, wherein the downloadable agent is executable on a computing device coupled to a LAN of a broadband subscriber, wherein the LAN is coupled by another device to a WAN; and store the WAN performance information in the database associated with the server,			

APPENDIX A-3: '654 PATENT DISPUTED TERMS

analyze the **WAN performance information** to generate an analysis result, the analysis result comprises at least throughput; and report the analysis result to at least one of the broadband subscriber and the broadband subscriber's service provider; wherein the server is operable to receive an on-demand change request associated with at least one of: throughput, or latency. 20. The system of claim 18, wherein the server is operable to store the **WAN performance information** with an associated timestamp. 33. The system of claim 18, wherein the **WAN performance information** includes at least one of: topological information, geographical information, time, latency, jitter, packet loss, type of communication device, device network identification, manufacturer and model of equipment, equipment characteristics, firmware, user's network usage pattern,			

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	RF characteristics including at least one of: signal power, frequency bands and mode of operation, environment statistics, or data on operation of communication devices. 36. The system of claim 18, wherein the server is operable to collect **WAN performance information** by polling or by a scheduled based system.			
8.	**"collect LAN performance data from at least one of the computing device and other device"** ('654 Patent, claims 4, 21) 4. The method of claim 1 wherein the downloadable agent is operable to **collect LAN performance data from at least one of the computing device and other device** coupled to the LAN. 21. The system of claim 18, wherein the downloadable agent is operable to **collect LAN performance data from at least one of the computing device and other device** coupled to the LAN.	AGREED	AGREED	"collect LAN performance data from at least one of the computing device and the another device."

APPENDIX A-4: '108 PATENT DISPUTED TERMS

U.S. Patent No. 11,477,108				
	'108 Patent Claim Language	**Plaintiff's Proposed Construction**	**Defendant's Proposed Construction**	**Court's Construction**
9.	**"identifying[, at the management device,] one or more operational conditions within the WAN in a different communication layer from the one or more communication layers on the LAN"** ('108 patent, Claims 1, 8, 15) 1. A management device, comprising: a Local Area Network (LAN) interface to communicably interface the management device with a LAN; a Wide Area Network (WAN) interface to communicably interface the management device with a WAN, wherein the WAN is to provide broadband connectivity to the LAN; one or more processors; and a non-transitory computer-readable medium or media storing one or more sequences of instructions which, when executed by at least one of the one or more processors, cause the management device to perform operations comprising: collecting LAN information from one or more communication layers on the LAN; and	Plain and ordinary meaning	"identifying [at the management device,] one or more operational conditions within the WAN that is not in any of the same layers from which LAN information was collected to make that identification"	

APPENDIX A-4: '108 PATENT DISPUTED TERMS

identifying one or more operational conditions within the WAN in a different communication layer from the one or more communication layers on the LAN by analyzing at least the collected LAN information. 8. A method for communication management comprising: communicably interfacing, via a Local Area Network (LAN) interface, a management device with a LAN; communicably interfacing, via a Wide Area Network (WAN) interface, the management device with a WAN, wherein the WAN is to provide broadband connectivity to the LAN; collecting, at the management device, LAN information from one or more communication layers on the LAN; and **identifying, at the management device, one or more operational conditions within the WAN in a different communication layer from the one or more communication layers on the LAN** by analyzing at least the collected LAN information. 15. A non-transitory computer-readable medium or media comprising one or more sequences of instructions which, when executed by at least one			

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processor, causes steps for communication management comprising: communicably interfacing, via a Local Area Network (LAN) interface, a management device with a LAN; communicably interfacing, via a Wide Area Network (WAN) interface, the management device with a WAN, wherein the WAN is to provide broadband connectivity to the LAN; collecting, at the management device, LAN information from one or more communication layers on the LAN; and **identifying, at the management device, one or more operational conditions within the WAN in a different communication layer from the one or more communication layers on the LAN** by analyzing at least the collected LAN information.			